

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently amended) In a computing system, a method for providing automatic universal resource locator (URL) analysis in connection with a process implicating a URL input mechanism, comprising:

receiving URL input ~~from in a client~~ computing device;

determining whether the URL input is valid;

when the URL input is invalid, detecting whether said input is a likely candidate for multilingual analysis, ~~and further~~ if said input is a likely candidate for said multilingual analysis, performing intelligent rules-based analysis including said multilingual analysis, ~~and for~~ identifying the invalid aspects of the invalid URL input; ~~and~~

displaying a smart error page comprising a transforming the invalid aspects of the invalid URL and outputting at least one valid alternative URL based upon said analysis obtained from at least one database of known URLs, wherein the at least one database of known URLs is a local copy of a portion of the Internet DNS URL database, the local copy updated dynamically for affirming the validity of the known URLs and for generating a blacklist of URLs to exclude socially undesirable domains; and

~~suggesting at least one of the said alternative URLs;~~

~~wherein said detecting whether said input is a likely candidate for multilingual analysis is based on at least one character inside a domain portion of said URL being above a specified code point, and wherein said domain portion does not include a normalized space, and wherein said domain portion includes at least one normalized period but the period is not leading or trailing;~~

2. (Canceled)

3. (Currently amended) A method according to claim 55 ~~1~~, wherein the at least one database of known URLs includes a top URL list checked before any other database.

4. (Currently amended) A method according to claim 3, wherein the at least one database of known URLs includes a secondary list which is analyzed after the top URL list if at least one alternative URL is not found based on an analysis of the top URL list.
5. (Original) A method according to claim 4, wherein the at least one database of known URLs includes a complete list of URLs which is analyzed after the secondary list if at least one alternative URL is not found based on an analysis of the secondary list.
6. (Original) A method according to claim 1, further including preprocessing the URL input to at least one of (1) remove non-domain name service (DNS) characters (2) to replace non-DNS characters and (3) to correct an error in protocol.
7. (Currently amended) A method according to claim 1, wherein the ~~client~~ computing device includes a browser and the URL input is ~~URL input~~ intended for one of navigation to a Web site and search on a Web site.
8. (Canceled)
9. (Currently amended) A method according to claim [[8]] 1, further including performing a search with the URL input as a query and displaying the results of the search on the error page, the results of the search comprising the name of a website pertinent to the URL input.
10. (Currently amended) A method according to claim [[8]] 1, further including displaying a link on the ~~client-computing device~~ error page, which link, if ~~input asserted~~ by the user, retries the original URL input.
11. (Currently amended) A method according to claim [[8]] 1, further including tracking user behavior in response to the display of the error page.
12. (Currently amended) A method according to claim ~~55~~ 1, wherein the at least one database includes URLs that are weighted according to their popularity, wherein data for determining popularity is obtained from a report on Internet usage.

13. (Original) A method according to claim 1, wherein said rules based analysis includes applying rules from a rules based table.

14. (Canceled)

15. (Original) A computer readable medium having stored thereon a plurality of computer-executable instructions for performing the method of claim 1.

16-17. (Canceled)

18. (Currently amended) In a computing system, a method for providing runtime automatic universal resource locator (URL) analysis and suggestion in connection with a service accessed from a client computing device utilizing a URL input mechanism, comprising:

~~inputting~~ providing a URL input to the URL input mechanism of the client computing device;

determining whether the URL input is valid and if invalid, detecting whether said input is a likely candidate for multilingual analysis, ~~and further~~ if said input is a likely candidate for said multilingual analysis, transmitting said URL input to a server computing device for intelligent rules-based analysis, including said multilingual analysis, ~~and identification of~~ for identifying the invalid aspects of the invalid URL input; and

displaying a smart error page comprising a) a suggested valid alternative URL, b) a partial search result comprising a name of a topic related to the invalid URL input, and c) a link that when asserted provides an extensive listing of search results related to the invalid URL input.

~~transforming the invalid aspects of the invalid URL and outputting at least one valid alternative URL based upon said analysis, and~~

~~suggesting at least one of the said alternative URLs;~~

~~wherein said detecting whether said input is a likely candidate for multilingual analysis is based on at least one character inside a domain portion of said URL being above a specified code~~

~~point, and wherein said domain portion does not include a normalized space, and wherein said domain portion includes at least one normalized period but the period is not leading or trailing.~~

19. (Original) A method according to claim 18, further including preprocessing said URL input.

20. (Original) A method according to claim 19, wherein said preprocessing includes preprocessing the URL input to at least one of (1) remove non-domain name service (DNS) characters (2) to replace non-DNS characters and (3) to correct an error in protocol.

21. (Previously presented) A method according to claim 56, wherein the at least one database of known URLs includes a dynamically updated database of current URLs.

22. (Previously presented) A method according to claim 56, wherein the at least one database of known URLs includes a top URL list checked before any other database.

23. (Original) A method according to claim 22, wherein the at least one database of known URLs includes secondary list which is analyzed after the top URL list if at least one alternative URL is not found based on an analysis of the top URL list.

24. (Original) A method according to claim 23, wherein the at least one database of known URLs includes a complete list of URLs which is analyzed after the secondary list if at least one alternative URL is not found based on an analysis of the secondary list.

25. (Currently amended) A method according to claim 18, wherein the client computing device includes a browser and the URL input is URL input intended for one of navigation to a Web site and search on a Web site.

26-27. (Canceled)

28. (Currently amended) A method according to claim ~~26~~, 18, wherein the smart error page further comprises ~~further including displaying a link on the client computing device error page,~~

~~which link, if input by the user, retries that is ascertainable by a user for re-trying the original URL input.~~

29. (Currently amended) A method according to claim 26 18, further including tracking user behavior in response to the display of the error page.

30. (Previously presented) A method according to claim 56, wherein the at least one database includes URLs that are weighted according to their popularity.

31. (Original) A method according to claim 18, wherein said rules based analysis includes applying rules from a rules based table.

32. (Previously presented) A method according to claim 18, wherein said rules based analysis includes applying rules to the analysis based upon at least one known URLs database.

33. (Original) A computer readable medium having stored thereon a plurality of computer-executable instructions for performing the method of claim 18.

34-35. (Canceled)

36. (Currently amended) In a computing system, a method for displaying alternative suggestions for an invalid universal resource locator (URL) input, comprising:

determining whether the URL input is valid and if invalid, detecting whether said input is a likely candidate for multilingual analysis;

analyzing the invalid URL input based upon intelligent rules-based analysis and said multilingual analysis when said input is a candidate for said multilingual analysis, and identifying the invalid aspects of the invalid URL;

referring to a local copy of a portion of the Internet DNS URL database, the local copy updated dynamically for affirming the validity of the URLs contained in the local copy;

determining from said local copy, a valid alternative URL based on analyzing the invalid URL input;

determining availability of a website corresponding to said valid alternative URL;  
if the website is currently unavailable, displaying a browser DNS error page to indicate  
that a page cannot be displayed; and  
if the website is currently available, displaying a smart error page comprising said valid  
alternative URL.

~~transforming the invalid aspects of the invalid URL and outputting at least one valid~~  
~~alternative URL based upon said analysis;~~

~~first displaying at least one of the said alternative valid suggestions; and~~

~~second displaying at least one search result based upon the URL input~~

~~wherein said detecting whether said input is a likely candidate for multilingual analysis is~~  
~~based on at least one character inside a domain portion of said URL being above a specified code~~  
~~point, and wherein said domain portion does not include a normalized space, and wherein said~~  
~~domain portion includes at least one normalized period but the period is not leading or trailing.~~

37. (Currently amended) A method according to claim ~~36~~ 59, further comprising ~~third~~  
~~displaying~~ a link which enables full blown search utilizing the invalid URL input as a query  
search term.

38. (Original) A computer readable medium having stored thereon a plurality of computer-  
executable instructions for performing the method of claim 36.

39. (Canceled)

40. (Currently amended) A computing device providing automatic universal resource locator  
(URL) analysis in connection with a process implicating a URL input mechanism, comprising:  
means for ~~inputting URL~~ providing input to the URL input mechanism of the ~~client~~  
computing device;

means for determining whether the URL input is valid and if invalid, detecting whether  
said input is a likely candidate for multilingual analysis, and if said input is a likely candidate for  
said multilingual analysis, transmitting said URL input with a means for transmitting to a server

computing device for intelligent rules-based analysis of the invalid URL input, including said multilingual analysis, and identification of the invalid aspects of the invalid URL; and

means for displaying an error page containing a valid alternative URL that is obtained by said server from a local copy of a portion of the Internet DNS URL database, the local copy comprising a block list for blocking the use of undesirable domains,

means for transforming the invalid aspects of the invalid URL to output at least one valid alternative URL based upon said analysis; and

means for suggesting at least one of the said alternative URLs;

wherein said detecting whether said input is a likely candidate for multilingual analysis is based on analysis of at least one character inside a domain portion of said URL being above a specified code point, and wherein said domain portion does not include a normalized space, and wherein said domain portion includes at least one normalized period but the period is not leading or trailing.

41. (Original) A computing device according to claim 40, further including means for preprocessing said URL input.

42. (Original) A computing device according to claim 41, wherein said means for preprocessing includes means for preprocessing the URL input to at least one of (1) remove non-domain name service (DNS) characters (2) to replace non-DNS characters and (3) to correct an error in protocol.

43-46. (Canceled)

47. (Currently amended) A computing device according to claim 40, wherein ~~the client~~ said computing device includes a browser and the URL input is ~~URL input~~ intended for one of navigation to and search on a Web site.

48. (Canceled)

49. (Currently amended) A computing device according to claim 48 ~~40~~, further including means for performing a search with the invalid URL input as a query and means for displaying the results of the search on the error page.
50. (Currently amended) A computing device according to claim 48 ~~40~~, further including means for displaying a link on the ~~client computing device~~ error page, which link, if ~~input~~ asserted by the a user, retries the original URL input.
51. (Currently amended) A computing device according to claim 48 ~~40~~, further including means for tracking user behavior in response to the display of the error page.
52. (Canceled)
53. (Original) A computing device according to claim 40, wherein said rules based analysis includes means for applying rules from a rules based table.
- 54-55. (Canceled)
56. (Currently amended) A method according to claim 18, ~~further comprising transmitting wherein~~ said URL input to a server computing device for performs analysis based upon at least one database of known URLs.
57. (Previously presented) A method according to claim 36, further comprising analyzing the invalid URL input based upon at least one database of known URLs.
58. (Canceled)
59. (New) A method according to claim 36, wherein the smart error message further comprises a mini-search result of topics related to the invalid URL input.



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60. (New) A method according to claim 36, wherein the browser DNS error page further comprises a text warning that the web site might be experiencing technical difficulties thereby preventing display of said page.